The following <u>Listing of the Claims</u> will replace all prior versions and all prior listings of the claims in the present application:

<u>Listing of The Claims:</u>

1.   (Currently Amended): A locating systems for tracking the movement of an item comprising:

A mobile target sized for attachment to an item to be traced, said mobile target comprising a first accelerometer, a first external position locating transceiver, a first processing element and a first radio frequency (FR) transceiver and

A mobile monitor, said mobile monitor including a second processing element and a second RF transceiver.

2.   (Original): the locating system of claim 1, wherein said first accelerometer is capable of recording acceleration along a plurality of axes.

3.   (Original): The locating system of claim 2, wherein and first accelerometer is a temperature compensated gas-thermal accelerometer.

4.   (Original): The locating system of claim 1, wherein said mobile monitor contains a second accelerometer, said second accelerometer being a multi-axial accelerometer.

5.   (Original): the locating system of claim 4, wherein the second accelerometer comprises a temperature compensated gas-thermal accelerometer.

6.   (Original): The locating system of claim 1, wherein said first external position locating transceiver comprises a GPS receiver.

7.   (Original): the locating system of claim 1, wherein said first external position locating transceiver comprises a device capable of bi-directional RF communication between said mobile target and said mobile monitor.

8.   (Original): The locating system of claim 1, wherein said first processing element is capable of calculating an initial velocity of the item to be tracked using a plurality of external positioning signal data points received by said first external position locating transceiver.

9.   (Original): The locating system of claim 1, wherein said first RF transceiver element is capable of communicating with the relay element using cellular network selected from the group consisting of AMPS, CDPD, GSM and CDMA network protocols.

10.   (Original): The locating system of claim 1, wherein said first RF transceiver further comprising a first plurality of embedded antenna elements, said antenna elements being capable of communication with an RF relay element.

11.   (Original): The locating system of claim 1, wherein said second RF transceiver further comprises a second plurality of embedded antenna elements, wherein said antenna elements are capable of communicating with an RF relay element.

12.   (Original) The locating system of claim 1, wherein said first external position locating transceiver further comprises a listening circuit, said listening circuit being capable of determining if an external positioning signal is present.

13.   The locating system of claim 12, wherein said listening circuit is capable of communicating the status of the external positioning circuit signal to said first processing element.

14.   (Original):   The locating system of claim 1, wherein said first processing element is capable of calculating a plurality of velocity vectors representing instantaneous

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velocity of an item to be tracked along multiple axes using accelerometer data recorded along said multiple axes.

15.   (Original): The locating system of claim 14, wherein said first processing element is capable of calculating the position of a mobile m monitor device relative to an item to be tracked utilizing initial velocity data and velocity vector data from the first accelerometer.

16.   (Original): The locating system of claim 1, further comprising one or more RF relay elements, said relay element capable of communicating with said first and second RF transceiver elements wherein the relative distance and direction of the mobile target device may be transmitted to the mobile monitor device.

17.   (Original): A method for determining the position of a target item to be tracked, comprising the steps of:

Recording a plurality of initial positions at selected times of the item to be tracked derived from a signal from an external position locating transceiver at selected times,

Calculating an initial position and velocity from said plurality of positions and times,

Obtaining accelerometer data along each axis from a multi-axis accelerometer, and

Calculating the current position of the target item to be tracked from said initial position and velocity and said accelerometer data.